

13. *A New Trematode from File-Fish : Lepotrema clavatum n. g. n. sp.*

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The worm occurs frequently, but few in number in the upper part of the intestine of *Monacanthus cirrhifer* Temminck & Schlegel, a file-fish distributed from Otaru southwards to Nagasaki. Allied in its general organization to the subfamily Lepocreadiinae, the worm exhibits some interesting peculiarities as follows.

Lepotrema clavatum n. g. n. sp.

It varies 1.6–1.9 mm in length with a maximum breadth 0.65–0.75 mm, the broadest part of the body being across the anterior testis. The cuticle is covered with minute closely-set spines which disappear gradually towards the posterior end.

The oral sucker is almost terminal and measures 0.25–0.3 mm in diameter. The acetabulum which is situated in the center of the body, is small measuring 0.17–0.2 mm in diameter. The ratio of the oral sucker to the acetabulum is 3:2. The pharynx is almost contiguous with the oral sucker and measures 0.16–0.18 mm in diameter. The esophagus is short about 0.08 mm in length. The intestinal diverticula are broad, and extend to the end of the body. Their ends are turned in towards the middle line.

The genital aperture is situated just behind the intestinal bifurcation and is displaced somewhat to the left of the middle line. It leads into a small genital chamber, into which the male and female ducts open. At the bottom of the chamber lying directly inside of the end part of the metratrum, there is a small genital sucker.

The testes are situated in the last third of the body; they are very close together, practically contiguous, and obliquely set one behind the other, anterior one on the right side and the posterior on the left. They are ovoid to rounded triangular in shape, and measure 0.2–0.3 mm by 0.18–0.26 mm. The cirrus pouch is a large conical body, and extends back to the posterior border of the acetabulum. It contains a small vesicula seminalis interna, a large conical pars prostatica, a convoluted

ductus ejaculatorius and a protrusible cirrus. Behind the pouch there lies a large vesicula seminalis externa.

The ovary is situated in the median line, directly in front of the anterior testis. Its shape is trilobate, the greatest diameter being about 0.18 mm. On its outer side and behind it lies a receptaculum seminis. Laurer's canal is present. The uterus occupies the space between the anterior testis and the acetabulum, describing only a few convolutions. The ova are not numerous and measure 0.05–0.058 mm by 0.03–0.033 mm. The vitellaria are voluminous. They are lateral and restricted on the ventral side of the intestinal crura extending from the esophageal level to the extreme posterior end of the body. They usually consist of small rounded follicles, but rarely especially in young specimens they are aggregated in few irregular rounded masses.

The excretory pore is on the dorsal surface, near the posterior end of the body. The vesicle is a wide tube extending as far forwards as a little beyond the acetabulum. From the vesicle two narrow collecting canals are given off at the dorsal side of the anterior testis. They run forward and give off respectively a returning branch, which comes back to near the posterior end of the body. The main canals reach to the sides of the pharynx and bifurcate, one returning back, and the other reaching to the sides of the oral sucker to ramify into smaller canals.

This trematode is evidently closely related to the sub-family Lepocreadiinae, having the same topographic structure, and differing from its members mainly in the position of the genital aperture, and in the presence of the genital sucker. In known genera of Lepocreadiinae i.e. *Lepocreadium*, *Lepidapedon*, *Pharyngora*, *Lepidauchen* and *Aeph-nidiogenes* the genital aperture is situated in the median line and have no genital sucker. The chief characteristics of the new genus *Lepotrema* may be summed up as follows:—Lepocreadiinae of small size, elongated and somewhat flat. Cuticle covered with spines. Acetabulum smaller than oral sucker, situated in the center of the body. Pharynx large; prepharynx and esophagus short; diverticula extending to near posterior end of body. Genital aperture lateral, directly behind the bifurcation. Genital sucker present. Cirrus pouch muscular, extending to the hind border of the acetabulum. Testes near the posterior end of the body, directly or obliquely one behind the other. Ovary trilobate, in front of the testes. Uterus short, confined between anterior testis and genital aperture. Vitellaria lateral, profusely developed, uniting in the middle line behind testes. Uterine eggs relatively large and few.

Excretory vesicle, simple tubular, extending further forward than the acetabulum.

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Explanation of Plate.

Fig. 1.—*Lepotrema clavatum* ventral view.

Fig. 2.—*Lepotrema clavatum* Excretory system, dorsal view.

Fig. 3.—*Lepotrema clavatum* Transverse section at genital aperture, diagrammatic.

A	Acetabulum	M	Metraterm
C	Cirrus	OS	Oral sucker
CP	Cirrus pouch	OV	Ovary
E	Egg	PH	Pharynx
EXV	Excretory vesicle	RS	Receptaculum seminis
EXP	Excretory pore	T	Testis
GC	Genital chamber	V	Vitellaria
GS	Genital sucker	VSE	Vesicula seminalis externa
IC	Intestinal crura		

